

Use 0.7 mm mechanical pencil. Keep 0.25 inch from edge of box. Erase mistakes thoroughly.

EOT1  
Problem Type Acronym

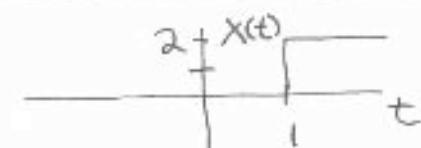
Name \_\_\_\_\_

ID # \_\_\_\_\_

Question

for  $x(t) = 2u(t - 1)$   
sketch  $x(t)$ ,  $\Sigma v \{x(t)\}$ ,  $od \{x(t)\}$

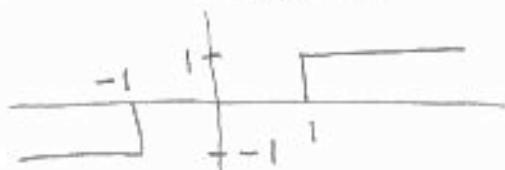
Answer



$\Sigma v \{x(t)\}$



$od \{x(t)\}$



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EOF2

Problem Type Acronym

Shattuck

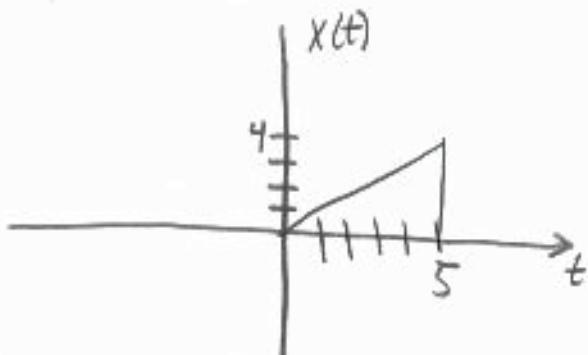
30

Name \_\_\_\_\_

ID # \_\_\_\_\_

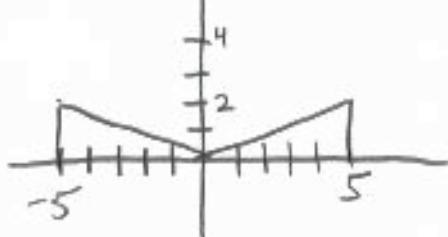
Question

Sketch & label the even &  
odd components of:

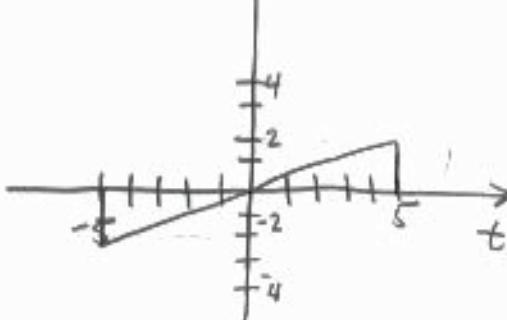


Answer

Even  $\{x(t)\}$



Odd  $\{x(t)\}$



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EOF3

Problem Type Acronym

Name \_\_\_\_\_

ID # \_\_\_\_\_

Question

Sketch the even and odd parts of the function

$$x(t) = \sin(t) + \cos(t)$$

labeling all axes.

Answer

$$\text{Ev } \{x(t)\} = \cos(t)$$



$$\text{Od } \{x(t)\} = \sin(t)$$



Question

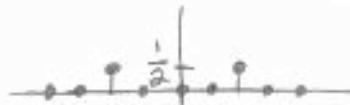
Sketch  $x[n] = s[n-2]$   
Find and sketch  $\sum \{x[n]\}$   
and  $Od \{x[n]\}$

Answer

$$x[n] = s[n-2]$$



$$\sum \{x[n]\} = \frac{s[n-2] + s[-n-2]}{2}$$



$$Od \{x[n]\} = \frac{s[n-2] + s[-n-2]}{2}$$



Question

for  $x(t) = \delta(t) - u(-1-t)$

sketch  $x(t)$ ,  $\mathcal{E}\{x(t)\}$ ,  $\mathcal{O}\{x(t)\}$

(three separate sketches)

Hint: make sure

$$\mathcal{E}\{x(t)\} + \mathcal{O}\{x(t)\} = x(t)$$

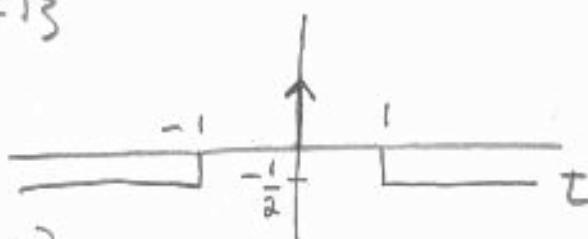
label axes + key values

Answer

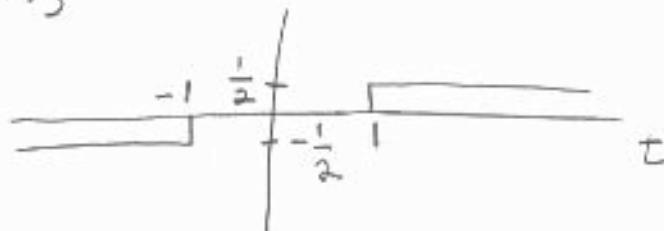
$x(t)$



$\mathcal{E}\{x(t)\}$



$\mathcal{O}\{x(t)\}$



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EOF 6

Problem Type Acronym

Name \_\_\_\_\_

ID # \_\_\_\_\_

Question

Sketch  $x[n] = S[n] + 2S[n+1]$

Then sketch the even and odd parts of  $x[n]$ ,  
 $\text{Ev}\{x[n]\}$  and  $\text{Od}\{x[n]\}$   
labeling key values.

Hint:

$$x[n] = \text{Ev}\{x[n]\} + \text{Od}\{x[n]\}$$

Answer



$$\text{Ev}\{x[n]\} = \frac{x[n] + x[-n]}{2}$$



$$\text{Od}\{x[n]\} = \frac{x[n] - x[-n]}{2}$$



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EOF7

Problem Type Acronym

Name \_\_\_\_\_

ID # \_\_\_\_\_

Question

$$\text{for } x(t) = u(t+1)$$

sketch  $x(t)$ ,  $\mathcal{E}_v\{x(t)\}$ ,  $\mathcal{O}_d\{x(t)\}$

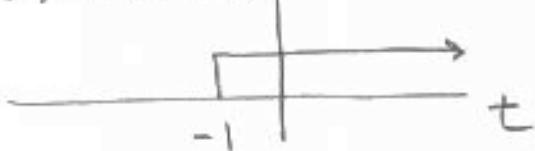
label axes and key values

make sure that

$$x(t) = \mathcal{E}_v\{x(t)\} + \mathcal{O}_d\{x(t)\}$$

Answer

$$x(t) = u(t+1)$$



$$\mathcal{E}_v\{x(t)\} = [u(t+1) + u(-t+1)]/2$$



$$\mathcal{O}_d\{x(t)\} = [u(t+1) - u(-t+1)]/2$$

